

Specimens of *G. globosum* and *G. macropus* on *Sabina barbadense* as well as specimens of *G. biseptatum* and *G. Ellisii* have been deposited in the following herbaria: Prof. A. B. Seymour, Cambridge, Mass.; Dr. J. C. Arthur, Purdue University, Lafayette, Ind.; Prof. S. M. Tracy, Biloxi, Miss.; Prof. F. E. Lloyd, Alabama Polytechnic Institute, Auburn, Ala.; Dr. E. M. Wilcox, Pathology Herbarium, University of Nebraska, Lincoln, Nebr.

I still have a few good specimens of *G. Ellisii* in my own collection.

I am still greatly interested in securing specimens of both *G. biseptatum* and *G. Ellisii*, especially from the region between New Jersey and Alabama and west to Texas, and any information of such collections would be greatly appreciated.

UNIVERSITY OF NEBRASKA,
LINCOLN, NEBRASKA

FOSSIL EUPHORBIACEAE, WITH A NOTE ON SAURURACEAE *

BY T. D. A. COCKERELL

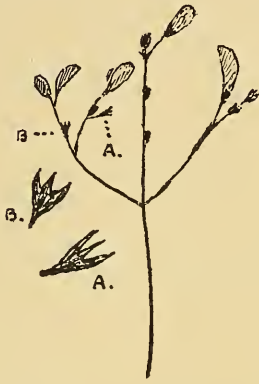
Up to the present time, no Euphorbiaceae have been described from the American Tertiaries, although from their present abundance and wide distribution there can be no doubt that they have long existed on this continent. Most of the plant-bearing strata are very poor in herbaceous forms, but Florissant is more fortunate in this respect, and has already yielded us a number of low-growing genera not elsewhere known fossil. Among the recently gathered materials I have been glad to find a couple of species which appear to be certainly Euphorbiaceous.

Acalypha myricina sp. nov.

Leaf lanceolate, the blade about 22 mm. long and 8 broad, on a short curved petiole; general form very much as in *A. gracilens* Gray; surface densely glandular-pitted; margin with very short blunt dark-colored gland-teeth; three prominent nervures, running nearly parallel. The figure shows the details better than they can be described.

* Illustrated with the aid of the Catherine McManes fund.

The reference to *Acalypha* seems safe; but there is a possibility that the plant may be a *Croton* of the type of *C. tigilium* L. In *Croton tigilium* the shape, margin, and venation are all different from those of the fossil, and I do not know of any *Croton* which matches it better.



Croton furcatulum Ckll.
A, B, calyces (enlarged).



Acalypha myricina Ckll.

Hab.— Miocene shales at Florissant, Colorado, Station 13 B (*W. P. Cockerell*, 1908). It occurs on a slab with a beautiful branch (bearing thirteen leaves) of *Myrica drymeja* (Lx.) Kn. The *Acalypha* leaf is superficially like that of some species of *Myrica*.

***Croton*(?) *furcatulum* sp. nov.**

Represented by a slender twig, 15 mm. long, giving rise to three slender branchlets as shown in the figure, these about 11 mm. long. The central branchlet supports small dark sessile objects, which appear to be buds or calyces, at 4.5 and 8 mm. from the base, and terminates in a small calyx, below which arises a long-oval or elliptical leaf (no doubt originally a pair), on a petiole about 3 mm. long; at the base of this leaf is a dark object which may be another calyx. The lateral branchlets fork at a distance of 6 mm. from their origin, giving rise to a pair of branchlets supporting calyces and leaves as shown in the figure. The calyces have long pointed lobes, apparently three in number.

The general appearance of the plant is suggestive of *Euphorbia* (in the old sense), but the calyces are much more like those of *Croton* or *Crotonopsis*. The species of *Croton* differ materially in the arrangement of the flowers, but among the scanty materials at my command I have not found one agreeing with the fossil. Possibly *C. monanthogynus* Michx. is as near to it as anything.

Hab.—Miocene shales of Florissant, Colorado, Station 14 (*S. A. Rohrer*, 1907).

***Tithymalus Willistoni* sp. nov.**

Some time ago I was informed by Dr. Williston that seeds of a plant almost identical with the well-known "Snow-on-the-Mountain" had been found in the Loup Fork Beds of Kansas, but had not been described. Through the kindness of Mr. H. T. Martin, I have been able to examine some of these, taken from the interior of a skull from the Loup Fork at Long Island, Kansas. As preserved they are perfectly white, and as Dr. Williston stated, they almost exactly agree with the seeds of *Tithymalus marginatus* (Pursh) Ckll. The sculpture is practically the same and the only difference I notice is that they are larger and more robust, $4\frac{1}{2}$ to 5 mm. long, and the larger ones 5 mm. in transverse diameter. The suture on one side is very evident. On some of the seeds, the reticulated sculpture has become almost obsolete, but evidently by wearing, as others show it very strongly. This fossil species may be called *Tithymalus Willistoni*.

FOSSIL SAURURACEAE?

The Saururaceae constitute a small family allied to the Piperaceae, with three genera. *Saururus* has one species in eastern North America and one in Asia. *Houttuynia* is Asiatic and *Anemiopsis* is represented by a single species living in damp alkaline spots in the western United States. Evidently the group is a waning one, and it might be expected that it would occur more abundantly in the Tertiary strata. It has not been recognized as such in our western Tertiaries, but *Piper Heerii* Lx., an unfigured species from the Eocene at Golden, Colorado, may belong there. According to Lesquereux, *P. Heerii* is exceedingly like *P. antiquum* Heer, a fossil from Sumatra. This *P. antiquum*, in the shape and venation of the leaf, agrees excellently with *Houttuynia*, and probably belongs to that genus.